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Design and Uncertainty Analysis for a *PVTt* Gas Flow Standard. Wright, J. D., Johnson, A. N., Moldover, M. R., **108**(*1*), 21 (2003).

**Murthy, A. V.**

Characterization of an Ellipsoidal Radiometer. Murthy, A. V., Wetterlund, I., DeWitt, D. P., **108**(*2*), 115 (2003).

**O**

**O'Brien, M.**

Comparison of the NIST and BIPM Medium-Energy X-Ray Air-Kerma Measurements. Burns, D. T., O'Brien, M., Lamperti, P., Boutillon, M., **108**(*5*), 383 (2003).

**P**

**Pappas, D. P.**

Interlaboratory Comparison of Magnetic Thin Film Measurements. da Silva, F. C. S., Wang, C. M., Pappas, D. P., **108**(*2*), 125 (2003).

**Parr, A. C.**

Statistical Interpretation of Key Comparison Reference Value and Degrees of Equivalence. Kacker, R. N., Datla, R. U., Parr, A. C., **108**(*6*), 439 (2003).

**Paterson, D. J.**

Mass Absorption Coefficient of Tungsten and Tantalum, 1450 eV to 2350 eV: Experiment, Theory, and Application. Levine, Z. H., Grantham, S., Tarrio, C., Paterson, D. J., McNulty, I., Levin, T. M., Ankudinov, A. L., Rehr, J. J., **108**(*1*), 1 (2003).

**Q**

**Quinn, T. P.**

An Experimental Method for Measuring Mechanical Properties of Rat Pulmonary Arteries Verified With Latex. Drexler, E. S., Slifka, A. J., Wright, J. E., McCowan, C. N., Finch, D. S., Quinn, T. P., McColskey, J. D., Ivy, D. D., Shandas, R., **108**(*3*), 183 (2003).

**R**

**Rehr, J. J.**

Mass Absorption Coefficient of Tungsten and Tantalum, 1450 eV to 2350 eV: Experiment, Theory, and Application. Levine, Z. H., Grantham, S., Tarrio, C., Paterson, D. J., McNulty, I., Levin, T. M., Ankudinov, A. L., Rehr, J. J., **108**(*1*), 1 (2003).

**S**

**Saunders, R. D.**

Radiometric Measurement Comparison on the Integrating Sphere Source Used to Calibrate the Moderate Resolution Imaging Spectroradiometer (MODIS) and the Landsat 7 Enhanced Thematic Mapper Plus (ETM+). Butler, J. J., Brown, S. W., Saunders, R. D., Johnson, B. C., Biggar, S. F., Zalewski, E. F., Markham, B. L., Gracey, P. N., Young, J. B., Barnes, R. A., **108**(*3*), 199 (2003).

**Schmidt, J. W.**

A Double-Primary Dead-Weight Tester for Pressures (35 to 175) kPa in Gage Mode. Jain, K., Cen, Y., Bowers, W. J., Schmidt, J. W.,**108**(*1*), 11 (2003).

A Primary Dead-Weight Tester for Pressures (0.05-1.0) MPa. Jain, K., Bowers, W., Schmidt, J. W., **108**(*2*), 135 (2003).

**Seltzer, S. M.**

New National Air-Kerma-Strength Standards for $^{125}$I and $^{103}$Pd Brachytherapy Seeds. Seltzer, S. M., Lamperti, P. J., Loevinger, R., Mitch, M. G., Weaver, J. T., Coursey, B. M., **108**(*5*), 337 (2003).

Changes in the U.S. Primary Standards for the Air Kerma From Gamma-Ray Beams. Seltzer, S. M., Bergstrom, P. M., Jr., **108**(*5*), 359 (2003).

**Shandas, R.**

An Experimental Method for Measuring Mechanical Properties of Rat Pulmonary Arteries Verified With Latex. Drexler, E. S., Slifka, A. J., Wright, J. E., McCowan, C. N., Finch, D. S., Quinn, T. P., McColskey, J. D., Ivy, D. D., Shandas, R., **108**(*3*), 183 (2003).

**Skrtic, D.**

Amorphous Calcium Phosphate-Based Bioactive Polymeric Composites for Mineralized Tissue Regeneration. Skrtic, D., Antonucci, J. M., Eanes, E. D., **108**(*3*), 167 (2003).

**Slifka, A. J.**

Thermal Conductivity Measurement of an Electron-Beam Physical-Vapor-Deposition Coating. Slifka, A. J., Filla, B. J., **108**(*2*), 147 (2003).

Thermal Evaluation of Scorched Graphite-Epoxy Panels by Infrared Scanning. Slifka, A. J., Hall, T., Boltz, E. S., **108**(*2*), 151 (2003).

An Experimental Method for Measuring Mechanical Properties of Rat Pulmonary Arteries Verified With Latex. Drexler, E. S., Slifka, A. J., Wright, J. E., McCowan, C. N., Finch, D. S., Quinn, T. P., McColskey, J. D., Ivy, D. D., Shandas, R., **108**(*3*), 183 (2003).

**Smeller, J. M.**

Potassium Bromate Assay by Redox Titrimetry Using Arsenic Trioxide. Smeller, J. M., Leigh, S. D., **108**(*1*), 49 (2003).

**Song, N.**

On the Stability of Exponential Backoff. Song, N., Kwak, B., Miller, L. E., **108**(*4*), 289 (2003).

**Squires, M. B.**

Towards High Accuracy Reflectometry for Extreme-Ultraviolet Lithography. Tarrio, C., Grantham, S., Squires, M. B., Vest, R. E., Lucatorto, T. B., **108**(*4*), 267 (2003).

**T**

**Tarrio, C.**

Mass Absorption Coefficient of Tungsten and Tantalum, 1450 eV to 2350 eV: Experiment, Theory, and Application. Levine, Z. H., Grantham, S., Tarrio, C., Paterson, D. J., McNulty, I., Levin, T. M., Ankudinov, A. L., Rehr, J. J., **108**(*1*), 1 (2003).

Towards High Accuracy Reflectometry for Extreme-Ultraviolet Lithography. Tarrio, C., Grantham, S., Squires, M. B., Vest, R. E., Lucatorto, T. B., **108**(*4*), 267 (2003).

**U**

**Ulvila, J. W.**

Evaluation of Intrusion Detection Systems. Ulvila, J. W., Gaffney, J. E., Jr., **108**(*6*), 453 (2003).

**V**

**VanLandingham, M. R.**

Review of Instrumented Indentation. VanLandingham, M. R., **108**(*4*), 249 (2003).

**Vayshenker, I.**

Optical-Fiber Power Meter Comparison Between NIST and PTB. Vayshenker, I., Haars, H., Li, X., Lehman, J. H., Livigni, D. J., **108**(*5*), 391 (2003).

**Vest, R. E.**

Towards High Accuracy Reflectometry for Extreme-Ultraviolet Lithography. Tarrio, C., Grantham, S., Squires, M. B., Vest, R. E., Lucatorto, T. B., **108**(*4*), 267 (2003).

**W**

**Walkiewicz, M. R.**

Accuracy of Nanoscale Pitch Standards Fabricated by Laser-Focused Atomic Deposition. McClelland, J. J., Anderson, W. R., Bradley, C. C., Walkiewicz, M., Celotta, R. J., Jurdik, E., Deslattes, R. D., **108**(*2*), 99 (2003).

**Wallace, W. E.**

Quantitative Synthetic Polymer Mass Spectrometry Workshop. Wallace, W. E., Guttman, C. M., Hanton, S. D., **108**(*1*), 79 (2003).

**Wang, C. M.**

Interlaboratory Comparison of Magnetic Thin Film Measurements. da Silva, F. C. S., Wang, C. M., Pappas, D. P., **108**(*2*), 125 (2003).

**Weaver, J. T.**

New National Air-Kerma-Strength Standards for $^{125}I$ and $^{103}Pd$ Brachytherapy Seeds. Seltzer, S. M., Lamperti, P. J., Loevinger, R., Mitch, M. G., Weaver, J. T., Coursey, B. M., **108**(*5*), 337 (2003).

**Wetterlund, I.**

Characterization of an Ellipsoidal Radiometer. Murthy, A. V., Wetterlund, I., DeWitt, D. P., **108**(*2*), 115 (2003).

**Wright, J. D.**

Design and Uncertainty Analysis for a *PVTt* Gas Flow Standard. Wright, J. D., Johnson, A. N., Moldover, M. R., **108**(*1*), 21 (2003).

**Wright, J. E.**

An Experimental Method for Measuring Mechanical Properties of Rat Pulmonary Arteries Verified With Latex. Drexler, E. S., Slifka, A. J., Wright, J. E., McCowan, C. N., Finch, D. S., Quinn, T. P., McColskey, J. D., Ivy, D. D., Shandas, R., **108**(*3*), 183 (2003).

**Wyatt-Millington, R.**

A Link-Level Simulator of the cdma2000 Reverse-Link Physical Layer. Gharavi, H., Chin, F., Ban, K., Wyatt-Millington, R., **108**(*4*), 299 (2003).

**Y**

**Young, J. B.**

Radiometric Measurement Comparison on the Integrating Sphere Source Used to Calibrate the Moderate Resolution Imaging Spectroradiometer (MODIS) and the Landsat 7 Enhanced Thematic Mapper Plus (ETM+). Butler, J. J., Brown, S. W., Saunders, R. D., Johnson, B. C., Biggar, S. F., Zalewski, E. F., Markham, B. L., Gracey, P. N., Young, J. B., Barnes, R. A., **108**(*3*), 199 (2003).

**Z**

**Zalewski, E. F.**

Radiometric Measurement Comparison on the Integrating Sphere Source Used to Calibrate the Moderate Resolution Imaging Spectroradiometer (MODIS) and the Landsat 7 Enhanced Thematic Mapper Plus (ETM+). Butler, J. J., Brown, S. W., Saunders, R. D., Johnson, B. C., Biggar, S. F., Zalewski, E. F., Markham, B. L., Gracey, P. N., Young, J. B., Barnes, R. A., **108**(*3*), 199 (2003).